

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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- Before the war Hungary's metallurgical coke production was limited. Hungarian lignite was not suitable for the production of metallurgical coke, and the Hungarian black coal contained too much sulphur.
- The Budapest gasworks was, before the war, the only Hungarian plant where coke was produced from imported coal, and this coke was used for industrial and household purposes. When coke produced by the gasworks no longer covered the domestic needs, a coking plant was established at Pécs. This coke was of rather good quality, but since it contained 3-5 percent sulphur, it could not compete with imported coke for metallurgical purposes. As a result, it was used only for other industrial and for household purposes.
- Experiments in coking domestic coal were conducted by József Varga, professor of chemical technology at the Budapest Technical University, and former Minister of Industry. At the Pécs coking works the experiments resulted in the neutralization of the sulphur content to the extent that the coke became suitable for metallurgical use. Experiments have also been conducted with Komlo coal and, as is well known, the Danube Metallurgical Plant at Sztalinváros is based on the use of Komlo coke.
- At the Komlo coking plant no new invention was being used. Only the various factors of coking, such as the quantity and pressure of watergas introduced and the quantity of gas extracted, have been varied in the experiments until metallurgical coke was produced.
- The best coking coal in the Pécs-Komlo area is mined at Mázsza-Szászvár, Nagymányok, and Váralja. It has a 6-8 percent water and 17-30 percent ash content. The ash content is reduced by the flotation process.

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to 8 percent. This coal variety has a heating value of 5,300-5,400 calories and yields 70 percent of coke and 12 percent of ash.

6. According to a recent survey, the Borsod region contains over one third of Hungary's total coal deposits. It was, therefore, logical to choose Kazincbarcika as the site of the latest industrial center of the country. The coal mined here contains 25-30 percent water and 15-20 percent ash and has a heating value of approximately 3,200 calories. Its advantage is that its sulphur content is only 1-3 percent. For the most part it does not cake and yields a soft coke. After the ash is washed out, the resulting small-sized coke is converted by tar into briquets. These are subsequently distilled again, yielding a briquet cake which can be mixed in the blast furnace with regular coke to the extent of 30 percent.
7. Hungarian lignites younger in origin than the Borsod variety are altogether unsuitable for coking. Good quality coal from Dorog and Tata, on the other hand, was not taken into consideration because these varieties represent only 12.5 percent of all Hungarian deposits and are indispensable for many industrial uses.
8. It is characteristic for Hungarian coke consumption that the blast furnaces are using approximately one ton of coke for the production of one ton of pig iron.
9. In connection with the future development of Hungarian metallurgy, therefore, the employment of low-shaft blast furnaces, furnaces equipped with rotating tubes, and electric furnaces, together with the production of sponge iron in which the iron ore is heated by natural gas, hydrogen, or carbonmonoxydes instead of by coke, is being investigated.

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